

# The Generator

Issue 520  
March 2025



**Palmerston Model Engineering Club**  
[www.pnmec.net.nz](http://www.pnmec.net.nz) - [pnmec@trains.net.nz](mailto:pnmec@trains.net.nz)

Managers of the Marriner Reserve Railway - Marriner Street - Palmerston North  
C/- 119 Ruapehu Drive - Palmerston North 4410

## **The Palmerston North Model Engineering Club** **Upcoming Club Events**

Club Nights typically start at 7.30pm and are usually held at the  
The Hall, 435 Church Street, Palmerston North.

### **Saturday 29th March**

Shed Visits

Starting at 10.30 am at Bill Krippner's home, 115 Ruapehu Drive,  
Palmerston North and on to The Esplanade Scenic Railway's workshop.

### **Thursday 24th April**

Annual General Meeting

Venue. The Board Room, Palmerston North Hospital.

Plus HO Trains and Slot cars

## **Marriner Reserve Railway**

### **Sunday 6th & Sunday 20 April**

Railway operations at the Marriner Reserve

Trains in operation from 1pm to 3pm

Weather permitting (Richard Lockett 06 323 0948)

### **Thursdays**

Railway operations for club members

Subject to ongoing track maintenance and weather

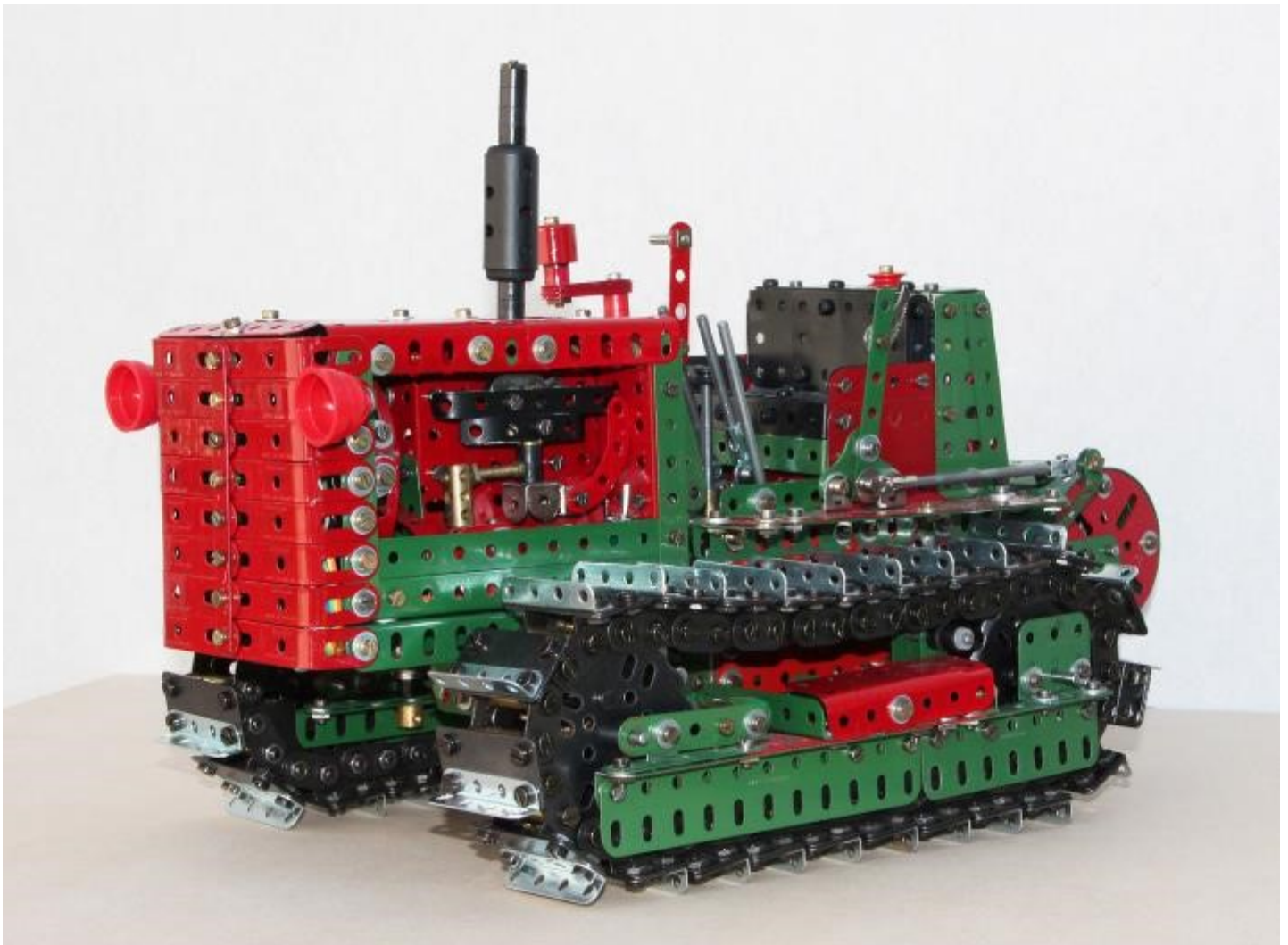
Contact track manager (Richard Lockett 06 323 0948)

## Club Notices

**March Club Night.** Taking advantage of what's left of summer conditions your committee thought that an outside activity would be good. So starting at 10.30am we will have a look at the projects that Bill Krippner is currently working on and other items of interest that he has and hear the stories that go with them! We will then move back across the Manawatu River and reassemble at The Esplanade Scenic Railway for a refuel and water (pack a picnic hamper and Thermos or grab a pie and coffee on the way) before we get shown through their maintenance and storage workshop.

**Annual General Meeting.** The Annual General Meeting of the Palmerston North Model Engineering Club will be held on Thursday the 24th of April 2025 in the Board Room at the Palmerston North Hospital starting at 7.30pm. Gate 2 Heretaunga Street, Palmerston North. Plus bring along your HO scale trains if you have one and also your slot cars likewise.

**New Zealand Meccano Convention.** The weekend of the 12th and 13th April sees Whanganui's turn to host the annual Meccano convention. Held in the Jubilee Stadium, 228 London Street, Whanganui and open 10am to 4 pm each day. Should be well worth a visit!



From your Editors picture archive, an International Harvester TD6 crawler tractor modelled in Meccano by Bruce Geange. Photo Bruce Geange

## February Club Night Report

Just a short report this month as in the editor's absence no notes or pictures were taken of the items brought along for discussion on the night which I will run through with the information provided to me from those of you with vague memories of the night

Advertised as a project progress night with a talk on Safety Valves by Richard Lockett who at short notice found himself called away that week for search and destroy mission with the Department of Conservation removing wilding Pinus Contorta seedlings from the northern Ruahine Ranges.

As a couple of club members turned up for this talk this will be rearrange for the May club night. Doug Chambers brought along the new nearly completed copper boiler for the Mudgeway family locomotive "Tasha" a replacement for a poor performing steel Briggs boiler. It was pointed out that this was the 45th copper boiler that Doug had built or had a significant involvement in their manufacture.

John Neal had been hard at work tidying up the partially built 3.5 inch gauge Shay steam locomotive that he recently purchased off John Tweedie. The loco had been parked up in storage for a couple of years with light surface rust just developing on the bright work which John was keen to rectify before recommencing the build.

Kyle Mudgeway had the beginnings of a 1/35 scale kit set model of an early Caterpillar RD7 bulldozer which he has started. An addition to the ever expanding fleet of full size and model Caterpillar equipment under the Mudgeway's care.



Photo Owen Mudgeway

Miniart was founded in 2001 in the Ukraine and released their first kitset in 2003 titled Russia infantry on the March. Hindsight is a wonderful thing but the company is properly wishing that they had titled it as Russia infantry in retreat or had chosen a non military subject as their first model released to market! The right hand picture showing the assembled engine, radiator and donkey starter engine in green army paint would suggest Kyle is doing a military version of the RD7 Bulldozer.

Fin mason has been book binding possibly Model engineering magazines and was keen to show off his skills and handy work.

David Edmonds a restorer of vintage machinery brought along a pair of after market Caterpillar bonnet stays which he didn't like the look of and was tasked to make some decent ones.



## Mangahao Power Station Visit

Your editor along with other club members managed to purchase tickets in time to secure a bus seat and access into the Mangahao powerhouse on Saturday the 8th of March, a rare opportunity to visit this historic power station.

The power station now just a few months over one hundred years old is still in operation producing electricity and when first built supplied the lower North Island doing away with local steam operated generating plants. Built with 5 Pelton wheel powered generators with 3 of these units replaced by a Francis Turbine unit about twenty years ago giving the station the capacity to produce 38 mega watts of electricity. Now operated by Manawa Energy and controlled remotely from somewhere in NZ the redundant upstairs control room is now partly housed by a museum with information and pictures of the construction of the scheme which was of great interest to us engineering enthusiasts. Built at a cost of 1.5 million pounds and taking 5 years to build it left me wondering as to whether it was build on time and to budget or was it a case of just do it!

The engineering staff were on hand to answer any technical questions and we take it for granted that when we flick the light switch on that the lights actually go on but there's a lot of engineering happening every day to keep the lights on. The Turbine and Pelton wheels run in white metal bearings and when the white metal needs to be replaced the shells are sent to Wellsford up north of Auckland because that's were a company who specialise in white metal bearings are, Metal spraying to harden up sealing surfaces is done by a firm in Tokoroa, the balancing of large rotating parts is done in Christchurch. A large part of the Francis Turbine needed to be replaced and the original manufacturer wasn't very helpful so the part was shipped to Christchurch where it was 3D scanned and reverse engineered to make a new one.



The 26 MW Francis Turbine



The 2 remaining 1924 Pelton Wheel  
Generators

Photo's Editor

The gravel road up to the dams from the powerhouse provides one of the main access routes into the northern Tararua Ranges and passes all 3 storage reservoirs and dams and on a nice day is worth a drive if you haven't been up there before. A walk across the no 1 and 2 dams provides access to tracks which lead to Burn Hut and a track around the western side of the Mangahao no 1 reservoir takes you further up the Mangahao River and Mangahao Flats Hut a 6 hour walk and again well worth a visit. The Kete Horowhenua website has many more photo's showing construction of the Mangahao power scheme.

No 1 Mangahao  
Dam  
Mangahao River



Photo  
Evan Greensides  
Web

No 1 Mangahao  
Dam and terraced  
campsite, early  
1920's.

Photo taken from  
other side of river  
to the above photo.



Photo unknown.  
Kete Horowhenua.



A Sunday afternoon  
at Marriner Reserve.

David Spark  
Hunslet.

Richard Lockett  
NZR W192.

Bill Krippner  
0-6-0 Thomas.

Shephen Drummond  
NZR Wab 687.

Jonathon Mason  
Kerr Stuart Wren  
Class "Robyn".

Photo  
Owen Mudgeway



Date and Time		Activity
Saturday 29th March	10.30am	Shed Visits
Thursday 3rd April	7.30pm	Committee Meeting
Sunday 6th April	1pm to 3pm	Marriner Reserve Railway
Sunday 20th April	1pm to 3pm	Marriner Reserve Railway
Thursday 24th April	7.30pm	Annual General Meeting Plus Ho trains and Slot cars
Thursday 1st May	7.30pm	Committee Meeting
Sunday 4th May	1pm to 3pm	Marriner Reserve Railway
Sunday 18th May	1pm to 3pm	Marriner Reserve Railway
Thursday 22nd May	7.30 pm	Club Night Boiler's Safety Valve's and Metal Finishes.

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[pnmec@trains.net.nz](mailto:pnmec@trains.net.nz) with "**Generator Please**" in the subject line.